

RELATIVE HUMIDITY.

The average percentages of Relative Humidity for the month ranged as follows: New England, 53 to 84; Middle Atlantic States, 57 to 77; South Atlantic States, 55 to 82; Gulf States, 59 to 75; Ohio valley and Tennessee, 50 to 61; Lower Lakes, 54 to 64; Upper Lakes, 59 to 75; Upper Mississippi valley, 54 to 63; Lower Missouri valley, 58 to 68; Red River of the north, 69 to 71; Eastern Rocky Mountain Slope, 43 to 77; Rocky Mountains, 20 to 44; Western Plateau, 26 to 50; California, 45 to 74; Oregon, 74 to 79. *High stations* report the following averages, not corrected for altitude: Mt. Washington, 81; Pike's Peak, 37.

WINDS.

The prevailing winds, at the Signal Corps stations, are shown by the arrows flying with the wind on chart No. II. The maximum hourly velocities have been given in the descriptions of the movements of areas of high and low pressure. The highest hourly velocity of the month at Mt. Washington was 133 miles from the NW. on the 27th, and at Pike's Peak 108 miles from the NE. on the 12th.

Total Movements of the Air.—The following are the *largest* monthly movements in miles recorded at the Signal Corps Stations viz: Pike's Peak, 20,025; North Platte, 13,827; Cape Lookout, 12,753; Dodge City, 12,734; Breckenridge, 11,472; Fort Sill, 10,975; Kittyhawk, 10,631. The *smallest* movements are: Boise City, Idaho, 3,555; Visalia, Cal., 3,489; Indianapolis, 3,403; Deadwood, Dak., 3,397; Uvalde, Tex., 3,168; Silver City, N. M., 2,940; Roseburg, Or., 2,408; Nashville, 2,207; Florence, Arizona, 1,656.

Local Storms.—May 29th, warm, moist southerly winds, with fair weather, prevailed over Iowa and southward to the Gulf States. About 5 p. m. a hail storm of great violence passed from the SW. to the NE., through Holt Co., Mo., and then, developing into a tornado, passed eastward through the southern part of Nodaway Co., Mo., for about 16 miles having a width of 300 to 3000 feet. It began near Smith passed south of Barnard and north of Bockolow [Bolocow?] and was last seen moving towards Conception, but apparently rose and was dissipated before reaching that place. The north side of the track was straight, clean and well-defined; the south side was jagged, looped and curved. On the same afternoon heavy hail and rain-storms occurred in Lawrence Co. and Riley Co., and many other portions of Kansas. May 30th, lower temperatures prevailed in Missouri and Kansas and the advancing edge of the area of cold NW. winds passing eastward over western Nebraska and Kansas, was accompanied by severe local thunder and hail storms, and in some places by tornadoes. At 4:35 p. m., Washington time, (or 3:15 p. m., local time on the 97th meridian) an oval area extended for 300 miles from west of Fort Sill to south of Omaha and having a shorter diameter of about 50 miles; towards this the winds were blowing from all directions, being warm, brisk SW. on the east side and cold, high NW. on the west side. At 11 p. m. this area is represented by a smaller one of low pressure in southeastern Nebraska and two of converging winds respectively in SE. Iowa and central Missouri. Severe tornadoes or equivalent local storms occurred between 3 p. m. and 11 p. m. as follows: 1, Scardia, Republic Co., Kansas. 2, at 4 p. m., tornado passed 4 miles northwest of Minneapolis, Ottawa Co., Kan., path 10 to 15 miles long, 1,000 feet wide; very violent at Delphos, Ottawa Co.; in all 18 persons reported killed. 3, between 6 and 6:30 p. m. tornado passed from Candreys house near county line between Riley and Clay Counties, Kansas, northeastward over or near Stockdale and Randolph, in Riley County; path [30?] miles long; very destructive; 3 persons killed. 4, From 7:45 to 8 p. m. tornado passed eastward over Blue Rapids, Irving and Frankfort, Marshall Co., Kansas, and Centralia, Nemaha Co., Kan.; very severe at Irving; high winds prevailed to long distances from the central path, which was about 30 miles long; in all over 30 persons killed and over 50 severely injured. 5, Richardson Co., Neb., the preceding tornado reported to have reappeared in this county. 6, At 1 p. m. [10? p. m.] near Kirksville, Adair Co., Mo.; 1 person killed. 7, Between 7 and 9 p. m., at Craig, Holt Co., Mo.; this storm was seen by observer at Corning, Holt Co. 8, About 6 p. m. tornado seen to form about 2 miles north of Lee's Summit, Jackson Co., Mo.; passed near Blue Springs and Oak Grove, and was seen to dissipate near Judge Williams' house; path northeastward, 10 miles long and 100 feet wide; 5 or 6 killed. This same storm was seen by observers at Independence and Buckner, Mo. 9, In Wayne Co., and at 9:10 a. m., local time, in Appanoose Co., Iowa, at a point 15 miles NE. of Unionville, Putnam Co., Mo.; one killed; (probably a heavy thunder and hail storm rather than a well developed tornado).

VERIFICATIONS.

Indications.—The detailed comparison of the tri-daily weather indications for May with the telegraphic reports for the succeeding twenty-four hours, shows the general percentage of omissions to be 0.2 per cent, and of verifications to be 82.9 per cent. The percentages for the four elements have been, Weather, 85.8; Direction of the Wind 85.2; Temperature, 82.6; Barometer, 77.9. The percentages of verifications by geographical districts have been: New England, 84.3; Middle States, 85.6; South Atlantic States, 80.4; East Gulf States, 76.6; West Gulf States, 76.7; Lower Lake region, 84.7; Upper Lake region, 87.1; Tennessee and the Ohio valley, 84.2; Upper Mississippi valley, 84.1; Lower Missouri valley, 84.0; North Pacific coast region, 93.1; Central Pacific coast region, 85.4; Southern Pacific coast region, 93.1. Of the 3,790 predictions that have been made, 160, or 4.2 per cent, are considered to have entirely failed; 145, or 3.8 per cent, were one-fourth verified; 580, or 15.3 per cent, were one-half verified; 353, or 9.3 per cent, were three-fourths verified; 2,552, or 67.3 percent, were fully verified, so far as can be judged from the tri-daily weather maps.